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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,354	11/18/2004	Hubert Ott		5984

7590 09/11/2006

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EXAMINER	
SCHNEIDER, CRAIG M	

ART UNIT	PAPER NUMBER
3753	

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/505,354	OTT ET AL.	
	Examiner	Art Unit	
	Craig M. Schneider	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/18/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Electromagnetic valve with Spacer that contains radial ribs".

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 5-6, and 24-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6-7, and 25-26 of copending Application No. 10/505,357. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter in claim 1 is disclosed in claims 1 and 6 of the copending application. Similarly,

claims 1 and 5 are disclosed in claims 1 and 6-7. Claims 1 and 6 are disclosed in claim 1 and 6-7. Claim 24 is disclosed by claims 1 and 6. Claims 24 and 25 are disclosed by claim 25 of the copending application. Claim 26 is disclosed by claim 26.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7, 11-13, 16-19, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Heintz (2,983,278).

Heintz discloses a valve as seen in Figure 1 with two pole pieces (11 and 12), wherein at least one pole piece is provided with a first fluid line (42 and 34) and a valve seat (43), and wherein the first fluid line is connected by the valve seat with a valve chamber (area around 27 including 23), having a valve body (27) moveable between at least two switch settings the at least two switch settings disposed between the first valve seat and at least one other stop surface (36), wherein the improvement comprises a spacer element disposed between a valve chamber and at least one other stop surface the spacer element (24) determining the distance between a first valve seat and the at least one stop surface (col. 1, line 49 to col. 2, line 72).

Regarding claim 2, wherein the first valve seat and the at least one stop surface are molded into a respective pole piece and the pole pieces are secured (13) directly to the spacer element.

Regarding claim 3, wherein the at least one spacer element has a fluid passage as seen in Figure 2.

Regarding claim 4, the valve further comprising outer connecting tubes (74 and 73) secured to at least one pole piece to carry fluid (col. 4, lines 17-21).

Regarding claim 12, the valve further comprising a permanent magnet (27).

6. Claims 1-3, 5-6, 10-11, 20, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Staiger et al. (4,336,823).

Staiger et al. discloses a valve as seen in Figure 1 with two pole pieces (10 and 12), wherein at least one pole piece is provided with a first fluid line (11, 14, and 15) and a valve seat as seen in Figure 2A, and wherein the first fluid line is connected by the valve seat with a valve chamber (17), having a body moveable between at least two switch settings the at least two switch settings disposed between the first valve seat and at least one other stop surface, wherein the improvement comprises a spacer element (23) disposed between a valve chamber and at least one other stop surface the spacer element determining the distance between a first valve seat and the at least one stop surface (col. 2, line 67 to col. 4, line 7).

Regarding claim 3, wherein the at least one spacer element has a fluid passage as seen in Figure 3.

Regarding claim 10, the valve further comprising an eccentric hole in a pole piece (12) for a second fluid line (15).

Regarding claim 20, wherein the pole pieces, the valve seat, the valve chamber, the valve body and the at least one guide piece is disposed in a tubular valve housing and the tubular valve housing is disposed in a control coil (5) as seen in Figure 1.

7. Claims 1-3, 5-7, 11, 20-22, and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kühl et al. (4,511,118).

Kühl et al. disclose a valve as seen in the Figure with two pole pieces (4 and 6), wherein at least one pole piece is provided with a first fluid line and a valve seat (5 and 7), and wherein the first fluid line (8 and 9) is connected by the valve seat with a valve chamber (11), having a body (3) moveable between at least two switch settings the at least two switch settings disposed between the first valve seat and at least one other stop surface (5 and 7), wherein the improvement comprises a spacer element (2) disposed between a valve chamber and at least one other stop surface the spacer element determining the distance between a first valve seat and the at least one stop surface (col. 3, line 4 to col. 4, line 11).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heintz in view of McMullen (4,437,815).

Heintz discloses all the features of the claimed invention except that the guide piece is made at least partially of plastic. McMullen discloses that sleeves, casing, plugs, and ports of valve armatures can all be made of plastic (col. 2, line 67 to col. 3, line 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize plastic as the material of construction as disclosed by McMullen onto the guide piece of Heintz, in order to decrease the manufacturing cost.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kühl et al. in view of McMullen (4,437,815).

Kühl et al. disclose all the features of the claimed invention except that the guide piece is made at least partially of plastic. McMullen discloses that sleeves, casing,

plugs, and ports of valve armatures can all be made of plastic (col. 2, line 67 to col. 3, line 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize plastic as the material of construction as disclosed by McMullen onto the guide piece of Kühl et al., in order to decrease the manufacturing cost.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heintz in view of Tespa (4,590,962).

Heintz discloses all the features of the claimed invention except that the guide piece includes a filter element. Tespa discloses the use of a filter element (31) in a passageway as seen in Figure 2.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the filter of Tespa into the valve passageways of Heintz, in order to retain any solid matter (col. 7, lines 12-20).

13. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heintz in view of Hunt (3,828,818).

Heintz discloses all the features of the claimed invention except that the permanent magnet is annular and is located on a projection of the pole piece that is tapered. Hunt discloses a permanent magnet that (32) that is annular in shape and is disposed on the valve seat area of the pole piece (10)(col. 2, lines 55-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the annular magnet of Hunt on the valve seats of Heintz, in order to decrease the electrical power required.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staiger et al. in view of Hunt.

Staiger et al. disclose am electromagnetic valve article of manufacture comprising: a control coil housing having a first end and a second end; a first substantially cylindrical pole piece having a first end and a second end disposed within the control coil housing the first end extending to about the first end of the control coil housing; a second substantially cylindrical pole piece having a first end and a second end disposed within the control coil housing the first end extending to about the second end of the control coil housing; a valve housing disposed intermediate the pole pieces; and a spacer element disposed between the second end of the first substantially cylindrical pole piece and the second end of the first substantially cylindrical pole piece to fix the size of the valve housing. Staiger et al. does not disclose a first permanent magnet disposed at about the second end of the first substantially cylindrical pole piece, a second permanent magnet disposed at about the second end of the second substantially cylindrical pole piece, and that the valve housing disposed intermediate the first permanent magnet and the second permanent magnet. Hunt discloses using a permanent magnet at the valve seat.

It would have been obvious to one skilled in the art to put the permanent magnet as disclosed by Hunt at each valve seat and to make the valve out of a magnetic

material onto the valve of Staiger et al., in order to decrease the electrical power required.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Blosser, Jr. (3,552,437) discloses a solenoid operated ball valve with guides. Bremner et al. (3,203,447), Heimann (3,809,123), and Masaki et al. (4,506,701) disclose solenoid valves that utilize magnets on the closing elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig M. Schneider whose telephone number is (571) 272-3607. The examiner can normally be reached on M-F 8:30 -5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMS CMS
August 31, 2006

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